DOCUMENT RESUME

ED 305 841 HE 022 375

TITLE Academic Preparation for College in Illinois. Admission Requirements for Public Colleges and Universities and Suggested Learning Outcomes for College-Bound Students. A Joint Report.

INSTITUTION Illinois State Board of Education, Springfield.; Illinois State Board of Higher Education, Springfield.

PUB DATE Mar 88

NOTE 64p.

PUB TYPE Reports - Descriptive (141)

EDRS PRICE MF01/PC03 Plus Postage.

DESCRIPTORS *Admission Criteria; Biology; *College Admission; *College Bound Students; *College Preparation; Fine Arts; Higher Education; Language Arts; Mathematics Instruction; *Outcomes of Education; Physical Sciences; *Public Colleges; Secondary Education; Second Languages; Social Sciences

IDENTIFIERS *Illinois

ABSTRACT

Information on college admission requirements is provided to assist students in preparing for baccalaureate degree programs and to assist in the identification and development of college-preparatory curricula in high schools. A section entitled "Admission Requirements at Public Colleges and Universities" discusses current and planned admission requirements for Illinois public universities and presents general guidelines for the identification of college-preparatory courses. Suggested learning outcomes for college-bound students, specific as to both knowledge and skills, are provided in the following areas: language arts; mathematics; biological and physical sciences; social sciences; fine arts; and second languages. (KM)

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ACADEMIC PREPARATION FOR COLLEGE IN ILLINOIS

Admission Requirements for Public Colleges and Universities and Suggested Learning Outcomes for College-Bound Students

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A Joint Report
of
The Illinois State Board of Education
and
The Illinois Board of Higher Education

MARCH 1988

HE 022 375

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Preface

This report provides information for use by high school administrators, counselors, and teachers as they assist students in preparing for baccalaureate degree programs and as they identify and develop college-preparatory curricula at their schools. Current and planned admission requirements for Illinois public universities are discussed and the recommendations of two statewide committees regarding the implementation of these requirements are described.

The Advisory Committee on Admission Requirements, composed of high school guidance counselors and college and university admissions directors, has developed general guidelines for the identification of college-preparatory courses which are included in the first section.

The Joint Task Force on Admission Requirements and Learning Outcomes has developed learning outcomes for college-bound students describing what high school graduates should know and be able to do if they plan to pursue a baccalaureate degree. The complete report of the Joint Task Force is included in this document. The membership of the Joint Task Force included high school, college and university faculty in language arts, mathematics, biological and physical sciences, social sciences, fine arts, and second languages.

The recommendations of these statewide committees provide answers to some of the more frequently asked questions about the implementation of high school subject admission requirements.

ADMISSION REQUIREMENTS
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Admission Requirements at Public Colleges and Universities

Improving the preparation of students for success in college, increasing the number of potential students who are appropriately prepared for baccalaureate studies, and expanding the choices of programs and majors that are available to college-bound students are major goals for both secondary and postsecondary education in Illinois.

In 1983, in response to concerns about significant increases in the need for remedial coursework among students entering postsecondary education, the Board of Higher Education began a study of admission requirements at Illinois public universities. The Board concluded that the adoption of minimum subject requirements for admission to baccalaureate programs was necessary to improve access to public postsecondary education and to increase chances for success in college for Illinois students.

In 1985, the Board of Higher Education adopted the following minimum high school subject requirements for admission to public universities and to baccalaureate transfer programs at community colleges:

- Four years of English (emphasizing written and oral communications and literature)
- Three years of social studies (emphasizing history and government)
- Three years of mathematics (introductory through advanced algebra, geometry, trigonometry, or fundamentals of computer programming)
- Three years of the sciences (laboratory sciences)
- Two years in foreign language, music, or art

These admission requirements, totaling 15 units of high school coursework, will be in effect for freshmen entering public universities and baccalaureate transfer programs at community colleges in the fall of 1993. At that time, all public postsecondary institutions will have identical minimum high school subject requirements. However, by 1990, all public universities that admit freshmen will have introduced their own high school subject admission requirements and these requirements will differ from one university to another. Table 1 provides information about the course requirements that have been established or are planned by public universities.

Most high schools in Illinois are able to provide students with a college preparatory curriculum that meets or exceeds the high school subject admission requirements described above. Many high schools are

Table 1

MINIMUM HIGH SCHOOL SUBJECTS TO BE REQUIRED FOR ADMISSION
OF FRESHMEN TO ILLINOIS PUBLIC UNIVERSITIES
PRIOR TO 1993

Institution	Effective Term	Minimum Units (in years) Required						
		Total	English	Social Studies	Mathematics	Science	Fine Arts or Foreign Language	Other**
Board of Governors								
Chicago State	Fall 1988	10	4	2	2	2		
Eastern Illinois	Fall 1988	10	4	2	2	2		
Governors State*								
Northeastern Illinois	Fall 1988	12	3	2	2	2		3
Western Illinois	Fall 1988	11	3	2	2	2		2
Board of Regents								
Illinois State	Current	4	3		1			
	Fall 1990	13	4	2	3	2	2	
Northern Illinois	Fall 1988	10	3	2	2	2	1	
Sangamon State*								
Southern Illinois University								
Carbondale	Summer 1990	11	3	2	3	2		1
Edwardsville	Fall 1990	15	4	3	3	3	2	
University of Illinois								
Chicago*	Current							
Pattern I		13	3	2	2	2		4
Pattern II		13.5	3	1	3.5	2		4
Urbana-Champaign*	Current							
Pattern I		12	3		2			7
Pattern II		12	3		2		2	5
Pattern III		12.5	3		3.5	2		4
Pattern IV		12.5	3-3.5	1	3-3.5	2	2	1
BME Requirements	Fall 1993	15	4	3	3	3	2	

* Notes:

Sangamon State University and Governors State University are upper division institutions that do not admit freshmen.

At Eastern Illinois University, one year of English may be satisfied by one year of foreign language or two semesters of any combination of drama, debate, public speaking, English or journalism.

Catalogs for the University of Illinois should be consulted to determine the pattern of requirements for a specific program.

** Description of "Other" Units

Northeastern Illinois University: Combination of fine arts, foreign language, computer science, and/or above areas.

Western Illinois University: art, foreign language, music, speech, journalism, film, religion, philosophy, theater, or computer science.

Southern Illinois University at Carbondale: foreign language, music, art, or vocational education.

University of Illinois at Chicago: two or more semesters in at least three of the following: English, foreign language, science (excluding general science), social studies, math (beyond algebra and plane geometry) and fine arts.

University of Illinois at Urbana-Champaign: additional college preparatory coursework.

Source: Illinois Board of Higher Education

taking steps to assure that college-bound students make the appropriate choices in selecting their high school courses and some high schools may be examining and further developing their college-preparatory curricula. The Advisory Committee on Admission Requirements and the Joint Task Force on Admission Requirements and Learning Outcomes addressed several questions related to the implementation of these requirements.

Who should identify college-preparatory courses? High schools are in the best position to evaluate their courses and identify the courses that should be included in a college-preparatory curriculum. Colleges and universities can be expected to accept a high school's designation of college-preparatory courses but will reserve the right to question that determination if there are reasons to do so based on the academic performance of students enrolled in college.

To assist college and university admissions personnel with reviewing students' high school transcripts, high schools could provide colleges and universities with listings of their courses by subject area identifying the college-preparatory courses. As an alternative to this approach, high schools could identify college-preparatory coursework directly on transcripts.

Which high school courses should be included in a college preparatory curriculum? Based on a review of statewide high school course listings, the following are general guidelines for the types of coursework that will and will not fulfill admission requirements in basic subject areas:

Courses used to meet admission requirements are those which are part of the high school's college preparatory curriculum and emphasize classroom or laboratory experience. Except in the area of the visual and performing arts, a course must be worth at least one-half (0.5) Carnegie unit to fulfill these requirements. Currently the Carnegie unit is defined as forty minutes daily, five days a week, for thirty-six weeks, or 120 clock hours. There is currently no time differential between laboratory and classroom coursework.

<u>English</u>. Course work should emphasize reading, writing, speaking, and listening. Particularly important is emphasis on sentence structure, paragraph structure, systematic organization, and diction--word choice that is appropriate, clear and effective. Analysis of literature might include characteristics such as point of view, theme, setting, character, and style to help the student become more sensitive and appreciative as a reader. Typically, such courses as general reading, journalism, mass communication, radio/t.v./film, and theater are not acceptable.

<u>Mathematics</u>. Traditional preparation for college mathematics is a year each of algebra, geometry, and advanced algebra, with a fourth year of advanced mathematics for engineering, science, and

many business majors. Many colleges require a minimum of algebra and geometry. Acceptable computer science courses include study of a structured programming language and use of computing as a means to solve problems. Typically, such courses as career/occupational mathematics, consumer mathematics, applied business mathematics, pre-algebra, and computer courses that do not involve programming and mathematical problem solving are not acceptable.

Social Studies. One year of United States History or a combination of United States History and American Government is required. Beyond history and government, acceptable social studies include anthropology, economics, geography, philosophy, political science, psychology, and sociology. Typically, courses of an applied, service, or vocational nature, or courses in religious dogma are not acceptable.

Science. Traditional preparation for college is a year each of biology, chemistry, and physics. Courses in biological and physical sciences are acceptable. An earth science or an introductory course to biology, chemistry, and/or physics which includes laboratory experiences is acceptable. Typically, a general science course taken to prepare for a laboratory science course is not acceptable.

Other. If foreign language (second language) is chosen, a minimum of one Carnegie unit is required; two units are preferred and required by some colleges. Credit of less than 0.5 Carnegie units in the visual and performing arts may be accumulated to meet these requirements.

Can any other courses be included in a college-preparatory curriculum? Although some types of courses are not usually considered to be college-preparatory, the content of these courses varies considerably among high schools. As noted above, high schools are in the best position to evaluate these courses and may choose to designate them as part of the college-preparatory curriculum. The learning outcomes for college-bound students may be useful to high schools in evaluating courses in areas such as communications, computer science, and vocational studies in order to determine if they should be included in the college-preparatory curriculum.

Are course requirements consistent with the current emphasis on learning outcomes? With the adoption of minimum high school subject admission requirements in 1985, the Board of Higher Education also called for the establishment of the Joint Task Force on Admission Requirements and Learning Outcomes in cooperation with the State Board of Education. This group was asked to develop learning outcomes for college-bound students based on the state goals for learning for all students that were adopted as part of the 1985 educational reform legislation.

Learning outcomes for college-bound students were developed in six learning areas that parallel the subject areas included in the Board of Higher Education's admission requirements: language arts (English), mathematics, biological and physical sciences (science), social sciences (social studies), and fine arts (music or art) and second languages (foreign language). The learning outcomes for college-bound students are based on the state goals for learning for all students in language arts, mathematics, biological and physical sciences, social sciences, and fine arts. Learning outcomes for college-bound students were also developed in second languages.

The learning outcomes for college-bound students are designed for use by high schools, colleges and universities as they address statewide goals for improving the preparation of students and strengthening the performance and achievement of baccalaureate students. The learning outcomes for college-bound students are to be used as guidelines for high schools in identifying and improving the college preparatory part of their curriculum, as a reference for high schools in describing their college-preparatory curriculum to colleges and universities, as a description of the expectations of colleges and universities for use in advising and assisting students and their parents in planning high school studies, and as the basis for common understanding and continuing dialogue among high school, college, and university faculty about learning expectations.

Will the learning outcomes for college-bound students replace minimum subject admission requirements? The adoption of the state goals for learning by the State Board of Education signifies an important change in the way learning is described and assessed. In the coming years, high schools will be expected to emphasize the achievement of learning objectives rather than the completion of courses. This shift in emphasis raises the question of whether the learning outcomes for college-bound students should replace the current subject requirements designating the number of years of study. One of the primary purposes for the adoption of admission requirements is to provide guidance to high school students so that they will be prepared for most programs of study in college and will be able to choose among them with a reasonable expectation for success. For now, specific courses seem to be the best way to communicate with students and their parents about preparation for college. In addition, high schools currently use course titles and units of time on transcripts to describe students' high school experience. The learning outcomes for college-bound students should be considered guidelines for use by high schools, colleges and universities and will not replace high school subject requirements for public institutions at this time.

SUGGESTED LEARNING OUTCOMES FOR COLLEGE-BOUND STUDENTS

Introduction

Joint Task Force on Admission Requirements and Learning Outcomes

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Suggested Learning Outcomes for College-Bound Students

The learning outcomes for college-bound students were developed by the Joint Task Force on Admission Requirements and Learning Outcomes to provide a general description of what students should know and be able to do if they are planning to pursue a baccalaureate degree. The learning outcomes for college-bound students are statements of the knowledge and skills students should acquire in order to have choices about their college major and have a reasonable chance of success in most programs of study leading to the baccalaureate degree. The outcomes do not specifically address expectations for students who plan to pursue other postsecondary educational opportunities such as the associate in applied science programs provided by community colleges in professional and technical fields.

Learning outcomes have been developed for six essential areas of learning: language arts, mathematics, biological and physical sciences, social sciences, fine arts (art, music, theater, and dance) and second languages (modern and classical languages). These guidelines are intended for use by high schools, colleges, and universities as they address statewide goals for improving the preparation of students for baccalaureate studies and strengthening the performance and achievement of baccalaureate students. The learning outcomes for college-bound students may be used in a number of ways:

- As guidelines for high schools in identifying and improving the college preparatory part of their curriculum;
- As a reference for high schools in describing their college-preparatory curriculum to colleges and universities;
- As a description of the expectations of colleges and universities for use in advising and assisting students and their parents in planning high school studies;
- As guidelines for colleges and universities in admission processes, placement procedures, and proficiency assessment;
- As a reference for colleges and universities in communicating their expectations to students and schools;
- As a basis for common understanding and continuing dialogue among high school, college, and university faculty about learning expectations.

The Joint Task Force on Admission Requirements and Learning Outcomes was established by the Illinois Board of Higher Education in cooperation with the Illinois State Board of Education. Dr. John Corbally served as general chairman of the Joint Task Force and its members included high school, college and university faculty representing the six learning areas.

State Goals for Learning for All Students and Learning Outcomes for College-Bound Students

The State Goals for Learning, adopted by the Illinois State Board of Education in 1985, describe what all students should know and be able to do as a result of their elementary and secondary schooling. In developing the learning outcomes for college-bound students, the members of the Task Force examined the state goals for learning for all students and then developed additional goals or reformulated the statements to reflect appropriate expectations for students preparing for baccalaureate studies. The learning outcomes for college-bound students are provided as guidelines for use by high schools. It is important that high schools are aware of these expectations although formal incorporation of these learning outcomes in learning assessment plans or school improvement plans is not required.

Like the State Goals for Learning for all students, the learning outcomes for college-bound students focus on the results of education rather than numbers of courses and hours spent in classes. As guidelines, the learning outcomes for college-bound students provide a local district with the flexibility to determine how and when the outcomes are covered in the curriculum. For example, an entire course may be dedicated to a single outcome or an outcome may be addressed in several components of the curriculum.

Scope and Content of Learning Outcomes for College-Bound Students

The learning outcomes for college-bound students are general statements describing what students should know and be able to do if they plan to pursue a baccalaureate degree. The outcomes are accompanied by descriptions of related knowledge and/or skills that further define the learning expectations. In general, the learning outcomes do not define the level of mastery that students should achieve, the complexity of the concepts and skills to be addressed, or the sophistication of material to be used in the classroom. It is expected that individual high schools will establish definitions of these aspects of learning according to their resources and the needs of their students, and that individual colleges and universities will develop more explicit descriptions of their expectations for performance according to their mission and clientele served. The learning outcomes for college-bound students can provide the framework for communication and cooperative efforts among institutions as these more precise expectations are defined.

Learning outcomes have been organized into six sections related to essential learning areas: language arts, mathematics, biological and physical sciences, social sciences, fine arts, and second languages. The Joint Task Force decided that organization of the learning outcomes by learning area would be convenient for faculty, counselors,

administrators and others who would use the report. However, users of these materials need to be aware of the relationships among learning areas and the common aspects of learning across areas. For example, some learning outcomes that are primarily associated with one learning area may be essential for learning in other areas. Similarly, some learning outcomes primarily associated with a specific area may be strengthened and refined by study in other areas. In addition, some learning outcomes are equally important to two or more areas.

The Joint Task Force recognized general skills that are essential for students who plan to pursue a baccalaureate degree, but are not associated directly with any of the six learning areas. These skills may be developed through study in all areas but may not necessarily arise from specific classroom experiences. These general skills include the ability to make decisions, to solve problems, to reason logically, and to think critically and analytically. General skills also include practical abilities such as good study and time management skills and the ability to use the library, computers and other resources and tools for learning.

Organization of Report

The following sections of this report contain the learning outcomes for college-bound students in each of six learning areas: language arts, mathematics, biological and physical sciences, social sciences, fine arts (art, music, theater, and dance) and second languages (modern and classical languages). Each learning outcome is accompanied by a description of knowledge and skills related to the outcome.

LANGUAGE ARTS

Suggested Learning Outcomes for College-Bound Students

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Language Arts

The language arts provide an essential foundation for college work through the study of literature and the development of fundamental skills in reading, writing, listening and speaking. The study of literature provides the basis for college-level studies in the humanities and enhances the development of analytical and critical thinking skills. The development of effective reading, writing, listening and speaking skills is critical for college-level work and occurs throughout the educational process as students develop increasingly sophisticated skills and deal with increasingly complex material.

Language Arts Learning Outcome I

Students preparing for baccalaureate studies should be able to read, comprehend, interpret, evaluate and use material written in the English language.

This outcome and the related knowledge and skills described below reflect current research and views about reading representing knowledge of the reading process and sound reading instruction. Reading is the process of constructing meaning through the dynamic interaction of the reader, the text and the context of the reading situation. Inference, which is an inherent part of the ongoing process of reading, requires that readers use both information from the text and prior knowledge to produce meaning. Thus, any text can have several acceptable and justifiable interpretations.

Skilled readers are sensitive to the purpose for which they are reading, the requirements of the reading task, their reading ability and knowledge about the text. Skilled readers also have the flexibility to monitor their comprehension and adjust reading strategies when necessary.

In real reading situations, students read whole texts, rather than short passages or sections extracted from longer texts. Reading instruction must withstand the reality test by assuring that students read longer, complete passages. The reading task becomes more complex as the difficulty of the reading material increases.

Students should be able to:

A. Recognize, recall and summarize material read.

B. Generate questions and predictions and give rationales for each prior to, during, and after reading.

C. Understand the various purposes for reading and identify text to accomplish each purpose.

D. Be sensitive to difficulties of the text, requirements of the task and their own abilities and motivation.

E. Draw inferences appropriate to achieving a full understanding of the text.

F. Integrate information from more than one text.

G. Justify and explain answers to questions about material read.

H. Judge the worth, value, accuracy and reliability of text.

Language Arts Learning Outcome II

Students preparing for baccalaureate studies should be able to listen critically and analytically.

Students should be able to:

A. Understand and evaluate the meaning of spoken messages.

B. Identify the sequence of ideas from spoken messages.

C. Draw inferences from spoken messages and nonverbal cues.

D. Distinguish among different purposes in communication.

E. Identify differing perspectives and points of view.

F. Respond effectively and appropriately.

Language Arts Learning Outcome III

Students preparing for baccalaureate studies should be able to write standard English in a grammatical, well-organized and coherent manner for a variety of purposes.

Students should be able to:

A. Use various invention strategies to generate ideas for the production of a written text.

B. Write for a variety of purposes and audiences using appropriate language and style.

C. Develop and maintain a focus with a clear thesis, a main idea, theme or unifying event.

D. Support and elaborate the main point with specific information or reasons.

E. Organize ideas clearly, coherently and logically within the appropriate major discourse structures.

F. Use the conventions of standard written English.

G. Revise, edit and proofread.

H. Use writing as a way of learning and as a method of discovering and clarifying ideas.

Language Arts Learning Outcome IV

Students preparing for baccalaureate studies should be able to use spoken English effectively in formal and informal situations to communicate ideas and information and to ask and answer questions.

Students should be able to:

A. Use various invention strategies to generate ideas for oral messages.

B. Present ideas in an orderly way with appropriate introduction, elaboration and conclusion.

C. Develop ideas through the use of appropriate support materials.

D. Use language and nonverbal cues appropriate to the topic, audience and setting.

E. Use language for a variety of purposes.

Language Arts Learning Outcome V

Students preparing for baccalaureate studies should be able to understand the various forms of significant literature representative of different cultures, eras and ideas.

Students should be able to:

A. Recognize and understand various ways of examining a literary text.

B. Interpret and evaluate selected literary works and support the interpretation and evaluation with evidence.

C. Distinguish among poetry, drama and fiction.

D. Distinguish among the types of nonfictional literature.

E. Understand selected literary works of the United States, Britain and the world.

F. Understand selected literary works from various cultures and historical periods.

G. Understand selected literary works that manifest different value systems and philosophies.

H. Understand the elements of various forms of literature, including nonfiction.

I. Understand figurative language.

J. Recognize literary themes and their implications.

K. Recognize symbolism, allegory and myth.

Language Arts Learning Outcome VI

Students preparing for baccalaureate studies should be able to understand the English language as a system, how this system has evolved historically and how it is shaped by a variety of forces.

Students should be able to:

A. Understand that the English language operates according to grammatical systems and patterns of usage.

B. Recognize the dynamic nature of language.

C. Identify various forces that shape language.

D. Recognize diversity of language conventions in both print and non-print contexts.

MATHEMATICS

Suggested Learning Outcomes for College-Bound Students

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Mathematics

The general goals of precollege mathematics education that define the appropriate context and methodology for the learning outcomes for college-bound students are as follows:

> As a result of their precollege mathematics education, students should understand that mathematics is a logical system with a precise language and students should be able to apply mathematical theorems and definitions and to follow and construct simple proofs.
>
> As a result of their precollege mathematics education, students should understand that mathematics is a tool for the study of the world around us. They should be familiar with practical applications of mathematics and should acquire the problem-solving skills necessary to formulate and analyze real-world problems.

The mathematics preparation required for a student entering a baccalaureate program at a college or university is determined by the following factors: the student's anticipated college major, the retention of flexibility in a student's major and career choice, and the demands of a quantitative society in which college graduates are expected to assume positions of leadership and responsibility. Based on these factors, this report describes the learning outcomes that are essential for all college-bound students and additional outcomes that are essential for students whose intended college majors place additional demands on their precollege mathematics training.

This part of the report describes the learning outcomes that comprise the essential mathematics preparation for all college-bound students. Students who achieve these outcomes will have a reasonable chance of success in college mathematics courses and in other courses with quantitative components. They will avoid the need for remedial work and can proceed with coursework required for graduation without delay.

It is strongly recommended that all college-bound students take mathematics during their senior year in high school even if they have already achieved the learning outcomes in mathematics that constitute the recommended preparation for college entrance. College placement test results indicate that students who do not take mathematics during their senior year in high school lose proficiency with the subject and as a result are often required to do remedial work as college freshmen.

Following the outcomes identified for all college-bound students is a section with additional recommended preparation for students majoring in fields of study that have highly quantitative requirements such as science, engineering, commerce, mathematics and computer science. Although some of this additional content would be included in a typical three-year college preparatory mathematics program, it

would be essential for most students intending to major in these fields of study to take a fourth year of high school mathematics to achieve all of the recommended learning outcomes. Most colleges offer course work covering the content described in this last section. Consequently students can obtain the additional preparation necessary for study in highly quantitative majors at the college level, but this training will delay progress with their college study program.

Mathematics Preparation for All College-Bound Students

Mathematics Learning Outcome I

Students preparing for baccalaureate studies should be able to understand number systems; perform computations mentally, with pencil and paper, and with a calculator; and select a computational method that is appropriate for a given situation.

Students should be able to:

A. Perform the basic operations with real numbers.

B. Convert among fractions, decimals and numbers in scientific notation.

C. Calculate simple powers and roots mentally and more complicated powers and roots with a calculator.

D. Use the basic terminology related to natural numbers, integers, rational and irrational numbers, real and complex numbers.

E. Represent real numbers on a number line.

F. Recognize mathematical relationships in real-world problems and apply mathematical techniques to find solutions to these problems.

Mathematics Learning Outcome II

Students preparing for baccalaureate studies should be able to apply the basic concepts of ratio, proportion and percent as used in arithmetic, algebra and geometry.

Students should be able to:

A. Interpret and solve percent problems, including those of simple and compound interest.

B. Recognize, formulate and solve real-world problems which are modeled by proportions or involve direct and inverse variations.

Mathematics Learning Outcome III

Students preparing for baccalaureate studies should be able to use basic systems of measure.

Students should be able to:

A. Measure or calculate, in both metric and customary units, lengths, perimeters, areas, surface areas and volumes of simple two- and three-dimensional geometric objects.

B. Convert measurements between and within systems including monetary systems.

C. Determine the effect of a change in one measure on a related measure.

D. Recognize and use units appropriate to measurement formulas.

E. Judge the level of accuracy appropriate to given measurements.

Mathematics Learning Outcome IV

Students preparing for baccalaureate studies should be able to perform basic operations with algebraic expressions and identify, analyze and solve problems using algebraic equations, inequalities and their graphs.

Students should be able to:

A. Apply the algebraic properties of real and complex numbers and operations.

B. Apply the properties of powers, roots and radicals, including negative and rational exponents, in the solution of simple equations and the simplification of expressions.

C. Perform operations with polynomials, including the special techniques of completing the square and factoring special products.

D. Solve, graph and interpret linear and quadratic equations and inequalities.

E. Solve linear systems of equations with two or three unknowns.

F. Formulate and solve problems of variation, mixtures, ratios and scaling.

G. Apply techniques of graphing and graphical interpretation to functions and equations.

H. Solve problems dealing with arithmetic and geometric sequences.

Mathematics Learning Outcome V

Students preparing for baccalaureate studies should be able to understand the terminology and properties of simple geometric figures in two and three dimensions and the logical structure of geometry, and to apply the tools of geometric analysis to solve problems in mathematics and other practical contexts.

Students should be able to:

A. Apply the properties of similarity, congruence, symmetry and geometric transformations to analyze geometric problems.

B. Perform basic geometric constructions with ruler and compass.

C. Apply the basic properties of parallel and perpendicular lines, triangles, polygons and circles.

D. Apply special right-triangle relationships including the Pythagorean Theorem and the trigonometric ratios of sine, cosine and tangent.

E. Apply formulas to determine angle measures, lengths, areas and volumes in simple two- and three-dimensional geometric figures.

F. Visualize, sketch and analyze three-dimensional geometric figures in terms of symmetry, congruence and cross sections.

G. Apply coordinate and algebraic methods to solve problems involving geometric figures in the plane.

Mathematics Learning Outcome VI

Students preparing for baccalaureate studies should be able to understand the basic concepts and applications of probability and statistics.

Students should be able to:

A. Organize and interpret data in tables, graphs and arrays.

B. Understand intuitively the concepts of randomness and sampling.

C. Calculate probabilities of simple and compound events.

D. Use summary statistics such as mean, median, mode, percentile and standard deviation appropriately.

E. Obtain information from frequency distributions, probability distributions and the normal curve.

Mathematics Learning Outcome VII

Students preparing for baccalaureate studies should be able to estimate outcomes in a variety of settings and judge the reasonableness of the results.

Students should be able to:

A. Use rounding, order of magnitude and intervals to estimate and determine reasonableness of answers to computations.

B. Use extrapolation and interpolation to predict values from data represented in graphical or in tabular form.

C. Determine the effect on the value of an expression resulting from a change in one or more of the terms in that expression.

Mathematics Learning Outcome VIII

Students preparing for baccalaureate studies should be able to solve problems using calculators and computers.

Students should be able to:

A. Use a calculator or prepared software to perform arithmetic and algebraic calculations and to produce graphical representations needed to solve problems.

B. Use a calculator or interactive software programs as tools to investigate the effects produced by a change in input values.

C. Use algorithmic procedures in problem solving.

Mathematics Learning Outcome IX

Students preparing for baccalaureate studies should be able to understand the basic concepts related to functions.

Students should be able to:

A. Use functions to describe relationships between variables in a variety of contexts.

B. Use terminology and notation related to functions.

C. Graph linear and quadratic functions as well as simple polynomial, exponential and rational functions.

D. Use graphical or algebraic methods to analyze functions arising in applied problems and find solutions or approximate solutions to these problems.

Mathematics Learning Outcome X

Students preparing for baccalaureate studies should be able to understand the language, notation and deductive nature of mathematics.

Students should be able to:

A. Use quantifying terminology (i.e., all, some, none, not, at least) and logical connectives (e.g., and, or, if-then, if and only if) appropriately.

B. Understand and apply basic terminology and properties of logical implication.

C. Use deductive and inductive reasoning and evaluate the validity of an argument in either form.

D. Construct valid mathematical arguments.

E. Understand the roles of intuition, definition, postulate (axiom), and proof in mathematics.

Mathematics Learning Outcome XI

Students preparing for baccalaureate studies should be able to communicate mathematical ideas and processes in a variety of modes.

Students should be able to:

A. Read and comprehend mathematical textual material.

B. Give written or verbal explanations of mathematical problems and their solutions using language appropriate for the intended audience.

C. Depict quantitative or spatial relationships through charts, tables, graphs, or diagrams.

D. Translate among written, verbal, graphic and symbolic modes of representing mathematical relationships.

Mathematics Preparation for Highly Quantitative College Majors

College students expecting to major in a highly quantitative field (e.g., engineering, mathematics, computer science, commerce, physical and life sciences, architecture, etc.) will need the more extensive mathematical background described in this Appendix in addition to the mathematics learning outcomes for all college-bound students as specified earlier in this report. Students who achieve the learning outcomes specified for all college-bound students by the time they finish high school and then decide to pursue a highly quantitative major may take the necessary coursework at the college level, but this may delay coursework required for graduation. It is definitely preferable to obtain as much as possible of the additional training described in this Appendix before graduation from high school.

All information available at the college level indicates that students who intend to major in a highly quantitative field in college should take mathematics during their senior year in high school even if they have achieved the recommended learning outcomes by the end of their junior year. Analytic geometry, if available, is an excellent choice for additional study. Some schools offer courses in statistics and probability or linear algebra that also provide useful preparation for college courses. Advanced Placement Calculus AB or BC, offered through the College Board at many high schools, provides an excellent means for very well-prepared students to gain additional mathematics training and college credit while still in high school. Brief exposures to calculus or high school calculus courses taught at a level below that of the College Board Advanced Placement Program are not recommended.

I. Students expecting to major in a highly quantitative field should be able to use trigonometry to analyze and solve problems arising from applications of mathematics. In addition, the student is expected to recognize trigonometric functions and trigonometric relationships in varied settings. In particular, students should be able to:

A. Graph the six basic trigonometric functions and graph the cotangent, the secant, and the cosecant functions as the arithmetic reciprocals of the tangent, the cosine and the sine functions, respectively.

B. Determine the effect of phase shifts and changes in period and amplitude on the graphs of the sine, cosine and tangent functions.

C. Use the basic trigonometric identities (i.e., reciprocal, Pythagorean, double angle, half-angle, and sum and difference formulas for sine, cosine and tangent) to solve trigonometric equations and to verify trigonometric identities.

D. Understand, graph and use the inverse sine, inverse cosine and inverse tangent functions.

E. Know both radian and degree measures of angles and be able to convert angle measure from one system to the other.

F. Use a calculator to find the values of trigonometric functions and inverse trigonometric functions over specified domains.

G. Solve trigonometric equations over a variety of domains with and without calculators.

H. Use polar coordinate representation of an ordered pair of real numbers and of a complex number and graph one- and two-dimensional figures defined by equations that involve polar coordinates.

I. Understand and use the geometric interpretation of multiplication, division, powers and roots of complex numbers expressed in trigonometric form.

II. Students expecting to major in highly quantitative fields should be able to use algebraic tools for solving problems. Students should be able to:

A. Determine the location or nonexistence of real and complex roots of polynomial equations using algebraic methods as well as numerical methods.

B. Graph equations and inequalities involving rational expressions, absolute value, and exponential and logarithmic functions using symmetry, intercepts and asymptotes.

C. Solve linear and nonlinear systems of equations and inequalities in two or three unknowns.

D. Understand the relationship implied in sequences and series, including arithmetic and geometric sequences and series; and determine a general term of a sequence from an implied pattern.

E. Solve exponential and logarithmic equations and apply the laws of logarithms and exponents to reasonably involved algebraic expressions.

F. Perform the basic operations with vectors and matrices in two and three dimensions and apply these concepts to the solution of systems of equations; compute the determinant of a matrix, apply the algebraic properties of determinants.

G. Understand and use mathematical induction as a method of proof.

III. Students expecting to major in highly quantitative fields should have additional knowledge, processes and skills in geometry. Students should be able to:

A. Recognize and use geometric modes of thinking and geometric facts in formulating and solving problems, even problems which are not presented in geometric settings.

B. Sketch the graph of the solid of revolution that results from revolving a given plane figure about a line and to recognize a given three-dimensional figure as a specific solid of revolution, if appropriate.

C. Sketch the graph and describe geometrically the intersection of geometrically simple surfaces and/or solids in three-dimensional space.

D. Understand the basic algebra of vectors and their application to geometry such as obtaining the vector equation of a line in two- or three-dimensional space and the standard equation of a plane in a three-dimensional space.

IV. Students expecting to major in highly quantitative fields should have additional knowledge, processes and skills concerning probability and statistics. Students should be able to:

A. Distinguish between counting situations which involve the number of permutations and the number of combinations of elements in given sets.

B. Apply the Binomial Theorem to counting problems and to appropriate probability problems and be familiar with the relationships between coefficients defined by the Binomial Theorem and Pascal's Triangle.

C. Understand the use of simulations involving random number generators to model problems and to make inferences.

D. Use statistical software packages to compute descriptive statistics and appropriate data-fitting equations for a given set of data.

V. Students expecting to major in highly quantitative fields should have additional knowledge, processes and skills in estimation. Students should be able to:

A. Estimate the value of a real number expressed as a combination of arithmetic, exponential and/or logarithmic operations.

B. Estimate the rational number approximation of a given irrational number within a specified level of accuracy.

C. Use technology, as well as mental arithmetic, to arrive at approximate solutions to problems and determine what degree of accuracy is to be expected of an answer to a given problem.

VI. Students expecting to major in highly quantitative fields should have additional knowledge, processes and skills concerning the use of calculators and computers. Students should be able to:

A. Formulate the solution to reasonably complicated multi-step problems as the solution of several subproblems.

B. Write a computer program to solve problems requiring recursive and nonrecursive procedures.

C. Interpret an algorithm written in a programming language or embedded in an application.

VII. Students expecting to major in highly quantitative fields should have additional knowledge, processes and skills concerning functions. Students should be able to:

A. Calculate the sum, product and composition of two functions.

B. Calculate and graph the inverse of a function and specify conditions under which the inverse is a function.

C. Understand and apply the inverse relationship between exponential and logarithmic functions.

BIOLOGICAL AND PHYSICAL SCIENCES

Suggested Learning Outcomes for College-Bound Students

Science Committee

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Harrisburg High School

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Southern Illinois University
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Ovid K. Wong
Evanston School District 65

John Young
Princeton High School

Leon J. Zalewski
Governors State University

Biological and Physical Sciences

Students planning for baccalaureate studies should have an understanding of the fundamentals of scientific inquiry and appropriate exposure to the content of the biological and physical sciences. Success in college is enhanced by the acquisition of the basic skills of scientific inquiry including mathematical and communication skills as well as the ability to use the basic processes necessary to perform experiments and to apply logical scientific arguments to problem solving. In addition, college-bound students should have adequate breadth and depth of knowledge in the major fields of science.

Biological and Physical Sciences Learning Outcome I

Students preparing for baccalaureate studies should have working knowledge of the process skills fundamental to conducting scientific experiments.

Process skills are fundamental to conducting scientific experiments and to developing an understanding of the scientific method. Data are collected in an experiment in an attempt to find relationships between variables and to gain information about objects and events. With this information students may discover scientific principles for themselves. This method of discovery through a quantitative laboratory experience is the basis for the development of these learning objectives.

The study of science requires the application of mathematical skills and principles to analyze data and discover relationships among variables. When basic mathematical skills are employed in the laboratory, students can see mathematics as a practical tool and increase their understanding of mathematics while, at the same time, developing a deeper comprehension of science. Related mathematics skills are described in the learning outcomes in mathematics for college-bound students.

Students should be able to:

A. Make precise definitions of objects or events based upon observable characteristics.

B. Organize collections of objects or events based upon observable characteristics.

C. Plan an experiment based upon observations.

D. Identify and use appropriate methods of measurement for a given task.

E. Identify the manipulated (independent) and responding (dependent) variable in an experiment.

F. Control variables in an experiment.

G. Establish a data format, collect data, and graph results.

H. Properly choose a set of values for the manipulated variable.

I. Recognize the need for replications of a measurement.

J. Identify possible sources of errors and recognize allowable error levels.

K. Formulate predictions based upon direct observation.

L. Test the validity of predictions through further experimentation.

M. Modify experiments so that previously controlled variables are changed.

N. Find the relationship between the manipulated and responding variables in an experiment by appropriate analytical techniques.

O. Evaluate models by interpreting evidence, making predictions and performing experiments.

Biological and Physical Sciences Learning Outcome II

Students preparing for baccalaureate studies should have a working knowledge of the concepts that are universal in science as well as concepts that are unique to a particular discipline.

Knowledge of science concepts is fundamental to the understanding of science, but must be taught along with related process skills. The true essence of science is more meaningful if conveyed through the study of a few major topics taught with greater depth of coverage, rather than through an overview of many topics. This study should be quantitative in nature. Because of the unique characteristics of science, a significant portion of learning time should be devoted to field or laboratory activities.

A sample of some major topics includes:

A. Nature of cells and organisms.

B. Relationships between structure and function of cells and organisms.

C. Diversity and interaction of life forms and mechanisms for the continuation and improvement of life forms.

D. Interaction of living things with the environment.

E. Understanding of the model of evolution and the role that this model plays in developing biological theories.

F. Atomic and molecular theories of matter.

G. Arrangement and predictive properties of the periodic table.

H. Understanding of the phases of matter.

I. Qualitative and quantitative aspects of chemical reactions.

J. Formation and composition of the universe.

K. Composition and interaction of the lithosphere, hydrosphere and atmosphere.

L. Agents of change in and on earth.

M. Relationships among displacement, velocity and acceleration.

N. Concept of force involving balanced and unbalanced systems.

O. Application of Newton's Laws of Motion.

P. Concept of work and the relationship between work and energy.

Q. Basic laws relating to energy.

R. Concept of Coulomb's Law.

Biological and Physical Sciences Learning Outcome III

Students preparing for baccalaureate studies should have knowledge of the contributions that scientific research makes to an understanding of technological and societal issues.

Students can enhance their process skills and increase their general knowledge by examining current applications of science to both practical everyday problems and broad technological issues. Through practical application, students can evaluate the interactions among science, technology, and society. Examination of these critical issues provides an opportunity for students to use their scientific experiences, their problem-solving techniques, and the results of scientific research in seeking answers to practical problems. Applying the process skills and concepts of science to problems facing society is fundamental to the education of college-bound students.

SOCIAL SCIENCES

Suggested Learning Outcomes for College-Bound Students

Social Sciences Committee

William W. Haddad, Co-Chairman
Illinois State University

James Marran, Co-Chairman
New Trier East High School

Patricia S. Charlier
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District 233

John Squibb
Lincoln Land Community College

Jean Tello
Palos Hills High School
District 230

James L. Thane
Black Hawk College

Social Sciences

The State Goals for Learning for the Social Sciences represent educational goals that are suitable for all students, including the college-bound. However, educational planners are encouraged to develop programs that will prepare students for entry-level work in colleges or universities. This preparation can best be accomplished through an integrated sequence of learning throughout secondary schooling that emphasizes a broad understanding of the social sciences. In addition to developing effective communication skills, students preparing for baccalaureate studies should develop competencies in critical inquiry and analysis appropriate to further study in the social sciences.

Social Sciences Learning Outcome I

Students preparing for baccalaureate studies should be able to understand and analyze comparative political and economic systems, with an emphasis on the political and economic systems of the United States.

Related knowledge includes:

A. Basic principles of the national government as expressed or implied in the Declaration of Independence, the federal and state constitutions, other major historical documents and significant court decisions.

B. Rights and responsibilities of citizenship under the United States Constitution.

C. Election processes at all levels of government including the impact of communication systems.

D. Structures and functions of the political systems in the United States and Illinois.

E. Influences of political action by individuals and interest groups on the development of the political system of the United States.

F. Factors that have contributed to the economic development of the United States.

G. Economic interdependence among the Illinois, United States and world communities.

H. Economic impacts of political decisions made by federal, state and local governments.

I. Structures and functions of major political systems in the world.

J. Major political events in the contemporary world and their impact on the changing structures and functions of governments.

K. International organizations like the United Nations and their roles and functions in the modern world.

L. Evolution and nature of rules and laws that govern human interactions.

M. Basic economic concepts that have traditionally shaped economic systems.

N. Traditional, market and command economic systems.

O. Effects of basic economic principles on producers and consumers in the public and private sectors.

Social Sciences Learning Outcome II

Students preparing for baccalaureate studies should be able to understand and analyze events, trends, personalities and movements shaping the history of the world, the United States and Illinois.

Related knowledge includes:

A. Chronology and significance of the major events in world history.

B. Historical developments leading to the present similarities and differences among the world's people.

C. Contributions of significant men and women in world history.

D. Chronology and significance of the major social, economic and political events shaping the experience of the United States.

E. Historical relationships between the United States and the other nations of the world.

F. Impacts of urbanization, industrialization and emerging technology on the nation's environment, as well as on its social, political and economic institutions.

G. Roles played by racial and ethnic groups in developing the nation's pluralistic society.

H. Historical and contemporary relationships of Illinois to the United States and the world.

Social Sciences Learning Outcome III

Students preparing for baccalaureate studies should be able to demonstrate a knowledge of the basic concepts of the social sciences and how these help to interpret human behavior.

Related knowledge includes:

A. Selected theories of human physical development.

B. Selected principles of learning and motivation.

C. Selected relationships between personality and development.

D. Development and functions of the institution of the family.

E. Common support networks in contemporary society.

F. Development of oral and written communication.

G. Selected types of antisocial behavior and various methods of intervention.

H. Influences of customs, traditions and folkways in shaping human behavior.

I. Effects of mass communication on human behavior.

Social Sciences Learning Outcome IV

Students preparing for baccalaureate studies should be able to demonstrate a knowledge of world geography with emphasis on the United States.

Related knowledge includes:

Location: Position on the Earth's Surface

A. Location of physical and cultural features of the local community, the state, the nation and the world.

B. Use of maps and models as primary geographic tools.

C. Influences of physical and cultural features on the locations of objects and places.

Place: Physical and Human Characteristics

D. Ways in which people define, name and alter places.

E. Different ways in which various groups within society may view places.

F. Positive and negative effects of human actions or natural processes on places.

Relationships within Places: Humans and Environments

G. Ways people inhabit, modify and adapt culturally to different physical environments.

H. Habitats as complex ecosystems which may have been modified by human action.

I. Ways people depend on, evaluate and use natural environments to extract needed resources, grow crops and develop settlements.

Movement: Humans Interacting on the Earth

J. Ways people depend on products, information and ideas that come from beyond their immediate environment.

K. Ways people move themselves, their products and their ideas across the earth's surface.

Regions: Formation and Change

L. Concept of region in physical and cultural terms.

M. Cultural and physical geography of each of the world's regions.

N. Basic physical and cultural geography of the United States.

Social Sciences Learning Outcome V

Students preparing for baccalaureate studies should be able to apply the skills and knowledge gained in the social sciences to decision making in life situations.

Students should be able to:

A. Apply rational decision-making processes based on goals, values and needs applied to selected consumer and social problems.

B. Evaluate sources of information in terms of selective criteria.

C. Evaluate costs and benefits of a particular course of action.

D. Analyze the interdependent roles of an individual as a consumer, a producer and a citizen in the economic, political, and social systems of the United States.

E. Understand the citizen's role in the election process at the local, state and national levels.

F. Know how to use the various levels of government.

G. Understand how individuals and/or groups effect change.

H. Analyze relationships between individual and societal value systems.

I. Understand the importance of the management of human and material resources.

Social Sciences Learning Outcome VI

Students preparing for baccalaureate studies should be able to demonstrate the skills of critical inquiry, problem solving and effective communication as they relate to concepts in the social sciences.

Students should be able to:

A. Formulate logical arguments through inference, comparison, evaluation and analysis.

B. Research, organize and interpret data from various sources.

C. Write with clarity.

D. Read, listen and observe actively and efficiently.

E. Appreciate and deal intelligently with ambiguity.

FINE ARTS

Suggested Learning Outcomes for College-Bound Students

Fine Arts Committee

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Bruce Boone
Southeastern Illinois College

Helen Engler
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Charlotte Herzog
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Wayne Shaw
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Jack L. Smith
Rock Valley College

Mark A. Sudeith
Chicago State University

Fine Arts

The arts are an essential component of a balanced education at both the secondary and postsecondary levels. The arts have a value in and of themselves which contributes to the quality of individual and civic life. In addition, the arts can and should be employed in other learning experiences and may also be approached through activities outside of the classroom setting. A report published by the College Board in 1985 states that "ignorance of art is a form of illiteracy." The unique perception of fundamental human issues gained through active involvement in the arts is cross-cultural, transcending geographic and political differences. The arts have a crucial role in the education of informed and responsible citizens.

Performance and production activities are the beginning as well as the end point of the arts. However, fine arts learning experiences should include knowledge and skills which enable students to perceive and discuss artistic works.

The learning outcomes in the fine arts for college-bound students represent appropriate general preparation for students planning to pursue a baccalaureate degree. Students who plan to pursue an undergraduate major in one of the arts should seek information about the appropriate preparation for their intended field of study.

Fine Arts Learning Outcome I

Students preparing for baccalaureate studies should be able to analyze, interpret and evaluate works in one of the arts through an understanding of the sensory, formal, technical and expressive qualities of the arts.

Students should be able to:

Visual Arts

A. Understand how sensory elements of two-dimensional and three-dimensional art forms interact in mixed media art and performance art.

B. Appreciate the interaction of sensory elements of cinematography, sound and editing in film and video art.

C. Actively examine visual works of art from several perspectives.

D. Distinguish between personal opinion and critical judgments of visual art work.

E. Appraise and improve their own art work.

Music

F. Listen perceptively and distinguish among such elements as tone color, melody/pitch, harmony, dynamics, texture, rhythm and tempo.

G. Understand how the formal elements such as repetition, contrast and variation are used in music.

H. Understand how the technical elements involved in sound production affect music.

I. Distinguish between personal opinion and critical judgment in evaluating music.

J. Appraise and improve their own performance.

Theater

K. Distinguish between personal opinion and critical judgment in evaluating a theater production.

L. Understand that critical judgment involves an analysis of intellectual, imaginative and emotional responses to a theater experience.

M. Appraise and improve their own performance.

Dance

N. Observe, remember, notate and evaluate a dance performance.

O. Distinguish between personal opinion and critical judgment in evaluating a performance.

P. Appraise and improve their own performance.

Fine Arts Learning Outcome II

Students preparing for baccalaureate studies should be able to understand and demonstrate the effective use of necessary skills, media, tools and processes by participation in the creation and/or performance of one of the arts.

Students should be able to:

Visual Arts

A. Understand that the domain of visual arts includes the following areas of study: architecture, ceramics, computer art, drawing, fiber arts, film, jewelry and metal work, mixed media, painting, performance arts, photography, printmaking, sculpture and video.

B. Demonstrate specialization in one or more of the visual arts areas.

C. Explore composition, expression, form, genre, style and symbolic meanings when producing visual arts.

D. Use existing stimuli in their own environment as a source of inspiration for the subject, theme and form of their art.

E. Solve a visual arts problem, carrying it through as many stages of development as necessary.

F. Investigate a single process to show a progression from the initial idea or plan to the finished product.

G. Understand the value of developing expertise in the studio process.

Music

H. Demonstrate an awareness of the major style, period, medium and form classifications in music.

I. Translate musical sounds into written symbols (using traditional or iconic notation) and written symbols into musical sounds.

J. Perform an instrumental or vocal piece in the appropriate style in solo or ensemble.

K. Compose music using traditional or nontraditional notation.

L. Improvise vocally or instrumentally.

Theater

M. Identify and apply performance styles to communicate a variety of moods and ideas.

N. Recognize the role of observation in understanding theater.

O. Understand the importance of developing plot structure.

P. Use improvisation in a theater performance.

Dance

Q. Use body movement which is intellectually responsive to exercise designed for dance.

R. Perform various dance styles.

S. Produce and perform compositional studies which present images, ideas, or feelings.

T. Use appropriate media encompassing voice, percussion, piano, recordings or silence.

U. Understand the value of developing physical strength, coordination and body awareness for quality dance performance.

V. Understand how observation is a necessary tool for better understanding of dance.

W. Understand how body expression, performance and technical elements of lighting, setting, sound effects, properties, costuming and make-up are interrelated to create a dance performance.

Fine Arts Learning Outcome III

Students preparing for baccalaureate studies should be able to perceive the relationship between arts and life of any time or place, recognizing the arts as both a reflection of, and an influence upon, a society, a culture and an individual's experience.

Students should be able to:

A. Recognize the uses of art by people of various cultures to express themselves in relation to the world.

B. Understand the history of arts through representative examples of Western and non-Western societies and of racial, gender and ethnic minorities.

C. Understand the relationships between contemporary art forms and the art of previous cultures.

D. Understand the relationships between the fine arts and the art of popular culture.

E. Understand the distinction between chronological and thematic/conceptual approaches to the study of art.

Fine Arts Learning Outcome IV

Students preparing for baccalaureate studies should be able to identify and relate significant work in the arts within major artistic and historical periods.

Students should be able to:

A. Recognize major works of art in the context of artistic and historical periods.

B. Appreciate the roles of specific artists and performers in the context of artistic and historical periods.

C. Understand the collective contributions of individual Western and non-Western cultures and societies.

Fine Arts Learning Outcome V

Students preparing for baccalaureate studies should be able to understand and appreciate the similarities, differences and interrelationships among the arts.

Students should be able to:

A. Use appropriate vocabulary to describe and explain the similarities, differences and interrelationships among music, visual arts, theater and dance.

SECOND LANGUAGES

Suggested Learning Outcomes for College-Bound Students

Second Languages Committee

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Second Languages

The study of a second language develops skills in listening, speaking, reading and writing modern and classical languages. It provides an awareness of the similarities and differences among cultures and of the contributions of the culture studied to civilization worldwide. It develops learning skills and self-concepts that transfer readily to other life situations. Second language study is an appropriate component of a balanced education at the elementary, secondary and postsecondary levels.

All students of second languages are expected to acquire communications skills and develop cultural understanding through their studies. These expectations operate at different levels according to the complexity of the communication involved or the concepts presented. The learning outcomes presented here provide a general description of these expectations, and this description is appropriate to all levels of language learning. As students progress from introductory to advanced instruction in a second language, they acquire increasingly more sophisticated communication skills and develop broader cultural understandings.

Study of classical languages stresses reading and writing skills based on classical texts and cultures. In the modern languages, students are expected to develop listening and speaking skills further than in the classical languages, learning to communicate orally as well as to read and write in the target language. Because of this significant difference, learning outcomes for modern and classical languages are presented separately. Students should demonstrate the outcomes in one of the modern or classical languages.

Modern Languages Learning Outcome I

Students preparing for baccalaureate studies should be able to understand oral discourse in the language on familiar topics when spoken at average conversational tempo.

Students should be able to:

A. Comprehend messages contained in oral communication in the form of questions, statements, directions, exclamations, and connected discourse.

B. Understand main ideas and pertinent details of oral communication relating to daily life.

C. Understand the standard language as spoken by various speakers.

D. Ascertain essential information from radio broadcasts, over the telephone, and in other situations where the speaker is unseen.

E. Use linguistic and cultural cues as aids in inferring meanings from oral communications.

Modern Languages Learning Outcome II

Students preparing for baccalaureate studies should be able to use the spoken language in familiar situations in a grammatical and idiomatic manner.

Students should be able to:

A. Initiate, sustain and bring to closure practical oral communicative tasks.

B. Use sufficiently diversified vocabulary including idiomatic expressions for conversation relating to daily life.

C. Converse with an acceptable pronunciation.

D. Speak in a grammatically acceptable manner.

E. Exercise appropriate cultural sensitivity in common conversational settings.

F. Describe, narrate and summarize orally.

Modern Languages Learning Outcome III

Students preparing for baccalaureate studies should be able to read, comprehend and evaluate authentic material in the language.

Students should be able to:

A. Comprehend materials written in a variety of forms.

B. Comprehend written materials on topics relating to daily life.

C. Recognize, recall, summarize and interpret information from a variety of written materials.

D. Understand the purposes of different types and styles of written material.

E. Use cognates, contextual and visual cues, etymological principles and other word-analysis strategies to comprehend written materials.

F. Read in the language for leisure and self-development.

Modern Languages Learning Outcome IV

Students preparing for baccalaureate studies should be able to write coherently and grammatically in the language on familiar topics for a variety of purposes.

Students should be able to:

A. Describe, narrate and summarize in writing.

B. Write in a grammatically acceptable manner.

C. Write about familiar interests, concerns and ideas.

D. Use vocabulary, idiomatic expressions, transitions and styles appropriate to diverse writing tasks.

E. Write, review and edit as appropriate to the writing task.

Modern Languages Learning Outcome V

Students preparing for baccalaureate studies should be able to exhibit understanding of diverse societies, cultures and civilizations related to the language studied, as well as knowledge of pertinent geographic factors and global forces.

Students should be able to:

A. Exhibit an acquaintance with the civilization, customs and institutions of the society studied.

B. Exhibit an awareness of the geographical influences and the historical background of the lands where the language is spoken.

C. Understand the global and interdependent nature of the human condition as exemplified by the societies studied.

D. Understand the major influences exerted internationally by the societies studied.

E. Recognize how the members of the society view their contributions to human development.

F. Demonstrate sensitivity to the values and attitudes of other cultures.

Modern Languages Learning Outcome VI

Students preparing for baccalaureate studies should be able to demonstrate skills necessary to learn second languages and apply these skills to self-development, learning tasks in a variety of subjects, and other life situations.

Students should be able to:

A. Use knowledge and skills acquired from second language study to learn other languages including their own.

B. Use listening, speaking, reading and writing skills characteristic of second language studies to advance competence in other areas.

C. Demonstrate flexibility and confidence in interacting with representatives of culturally diverse groups.

D. Exhibit an awareness of the historical development of language and its dynamic nature as an expression of culture.

E. Use an understanding of cultural and ethnic diversity to enhance perceptions of the role of ethnic groups in U.S. society.

F. Use an understanding of other societies and global forces to enhance perceptions of self and of personal roles in society.

G. Exhibit an awareness of the career, social, self-improvement and recreational benefits of knowing more than one language.

H. Recognize the potential of travel, living and study abroad to enhance language skills, cultural sensitivities and self-concept.

Classical Languages Learning Outcome I

Students preparing for baccalaureate studies should be able to understand the spoken classical language as related to classroom activities.

Students should be able to:

A. Follow simple commands and directions.

B. Understand questions posed by teachers and classmates related to the readings and classwork.

C. Comprehend dictation.

Classical Languages Learning Outcome II

Students preparing for baccalaureate studies should be able to use the spoken classical language as related to classroom activities.

Students should be able to:

A. Pronounce the language according to its sound system.

B. Read aloud connected passages of various lengths.

C. Answer questions, posed by the teacher and classmates, related to the readings and classwork.

D. Give individual and choral recitations of paradigms.

E. Recite from memory passages representative of a variety of literary texts.

Classical Languages Learning Outcome III

Students preparing for baccalaureate studies should be able to read, comprehend, and evaluate material in the classical language with appropriate use of reference sources.

Students should be able to:

A. Use cognates, contextual cues, etymological principles, grammatical analysis and other strategies to comprehend and translate written materials.

B. Read a variety of authors and genres for the purpose of comprehension and translation.

C. Recognize, recall, summarize and synthesize information from various written materials.

D. Examine various written materials for cultural and historical content.

E. Evaluate critically the various literary styles and understand their relationship to the text.

Classical Languages Learning Outcome IV

Students preparing for baccalaureate studies should be able to write correctly and grammatically in the classical language.

Students should be able to:

A. Write in response to spoken directions as related to classroom activities.

B. Respond to written questions concerning readings and classwork.

C. Complete grammatical and syntactical exercises.

D. Demonstrate precision in spelling and accent notation.

Classical Languages Learning Outcome V

Students preparing for baccalaureate studies should be able to demonstrate knowledge of classical cultures and civilizations and an understanding of their contributions to other civilizations.

Students should be able to:

A. Recount the major classical writers and their works and understand their legacies to literature and art.

B. Explain the origins of myth, recount the major myths, and trace the influence of myth in literature, art and religion.

C. Understand the role of historical events, processes, and individuals in shaping the development of civilizations.

D. Understand the relationship between geophysical features and historical developments.

E. Recognize the role of archaeology in developing an understanding of life in the classical world.

F. Recognize parallels between customs and lifestyles of the classical and modern worlds.

Classical Languages Learning Outcome VI

Students preparing for baccalaureate studies should be able to demonstrate the skills necessary to learn second languages and apply these skills to self-development, learning tasks in a variety of subjects, and other life situations.

Students should be able to:

A. Exhibit an enhanced English vocabulary based on the knowledge of Latin and/or Greek roots and the process of etymology.

B. Use the Latin abbreviations and expressions commonly used in English.

C. Recognize the nature of language universals, linguistic borrowing, cognates, derivatives and other comparative/contrastive features of language.

D. Transfer writing skills, reading comprehension skills and word analysis strategies characteristic of classical language studies to advance competencies in other subjects.

E. Transfer learning strategies, thinking skills and analytical processes characteristic of classical language studies to other learning tasks.

F. Exhibit an awareness of the historical development of language and its dynamic nature as an expression of the culture.

G. Use an understanding of cultural identity and ethnic diversity to enhance perceptions of the role of ethnic groups in U.S. society.

H. Demonstrate an awareness of the career, social, self-improvement and recreational benefits of knowing more than one language.

I. Recognize the potential of travel, living, and study abroad to enhance language skills, cultural sensitivities and self-concept.

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